Learning Programming at Scale

Summary of Philip Guo's recent research projects

Last updated: Aug 2018. All papers available at http://pgbovine.net/publications.htm

Understanding Diverse Learners

Conversational programmers
[VL/HCC 2015][CHI 2016][CHI 2018]

Hackathon participants
[ICER 2017]

Gender dynamics in forums
[FSE 2016]

Older adults aged 60+
[CHI 2017]

Non-native English speakers
[CHI 2018]

Culture, values, & debugging
[VL/HCC 2018]

Building Programming Environments

Visualizing code execution
[SIGCSE 2013] [UIST 2017]

One-on-one live help
[VL/HCC 2015]

One-to-many code tutoring
[UIST 2015]

Scaffolding pair programming
[CHI 2017]

Data science using the web
[UIST 2017]

Web UI prototyping
[UIST 2018]

Redesigning Programming Tutorials

Browsing digital textbooks
[EDM 2015]

Discussing code in forums
[VL/HCC 2015]

Learners annotating code
[VL/HCC 2015] [VL/HCC 2017]

Programming tutorial videos
[Learning@Scale 2018]

Creating multi-app tutorials
[UIST 2017]

Profiling multi-app tutorials
[UIST 2018]